

WHAT IS CLAIMED IS:

1. An ozone production device in which a voltage is applied between an anode and a cathode to produce ozone in an electrolysis target liquid by electrolysis,

5 wherein the anode is integrated with the cathode via a predetermined interval without separating the anode from the cathode so as to constitute an electrolytic portion.

10 2. The ozone production device according to claim 1, wherein the anode and the cathode comprise water-permeability members capable of passing the electrolysis target liquid.

15 3. The ozone production device according to claim 1 or 2, further comprising:

a film having insulation properties and ion permeability, which is disposed between the anode and the cathode.

20 4. The ozone production device according to claim 3, wherein the film is a cation-exchange film.

25 5. The ozone production device according to claim 1, 2, 3, or 4, wherein the electrolytic portion is fixed in a storage tank in which the electrolysis target liquid is stored.

6. The ozone production device according to claim  
1, 2, 3, or 4, wherein at least a part of the electrolytic  
portion is immersed in the electrolysis target liquid in  
5 the storage tank in which the electrolysis target liquid is  
stored, and the electrolytic portion is movable in the  
electrolysis target liquid.

7. The ozone production device according to claim  
10 1, 2, 3, 4, 5, or 6, wherein a material constituting the  
anode and/or the cathode comprises a metal or metal oxide  
containing ruthenium and niobium, or a metal or metal oxide  
containing platinum and tantalum.

15 8. The ozone production device according to claim  
1, 2, 3, 4, 5, 6, or 7, wherein the electrolytic portion is  
covered with a cover member having insulation properties  
and water permeability.

20 9. The ozone production device according to claim  
6, 7, or 8, wherein the electrolytic portion comprises a  
heavy bob member in a lower part.